

Amendments to the Claims:

The following compilation of claims replaces all prior versions or compilations in the application.

Listing of Claims:

1. (Cancelled)
2. (Currently Amended) The method of claim 25 24 wherein the gas and/or vapor vapor is comprised of at least one member selected from the group consisting of amines, alcohols, thiols, ammonia, sulfur dioxide, sulfur dioxide and oxygen, sulfur trioxide, hydrogen sulfide, carbon dioxide, carbon monoxide, carbon sulfide, carbonyl sulfide, hydrogen peroxide, and water.
3. (Original) The method of claim 2 wherein the gas and/or vapor is applied at a pressure of between 50 Torr and at about one atmosphere.
4. (Original) The method of claim 2 wherein the residue is exposed to ultraviolet radiation by blanketing the residue with ultraviolet radiation.
5. (Cancelled)

6. (Original) The method of claim 4 wherein the gas and/or vapor is selected from the group of ammonia, hydrogen and sulfur dioxide.

Claims 7 to 13 (Cancelled).

14. (Currently Amended) The method of claim ~~25~~ 24 wherein the gas and/or vapor includes at least one member selected from the group consisting of ammonia, hydrogen and sulfur dioxide.

Claims 15 to 24 (Cancelled).

25. (New) A method of processing a semiconductor wafer comprising the steps of:

coating the wafer with a photoresist;

imaging a pattern on the photoresist with ultraviolet radiation;

developing the photoresist;

hardbaking or stabilizing the photoresist;

forming integrated circuit components on the wafer; and

removing the photoresist from the wafer, by

a) performing an ashing process on the photoresist with a plasma which removes the photoresist except for a residue; and

b) removing the residue without the use of a laser by applying a gas and/or

vapor to which the residue is reactive, and which need not be in supercritical or dense phase form, by

i) applying said gas and/or vapor to which the residue is reactive to the wafer while the temperature of the wafer is at an elevated level with respect to ambient temperature;

ii) exposing the wafer to ultraviolet radiation provided by an ultraviolet lamp simultaneously with said gas and/or vapor applying step, wherein the applying and exposing steps are continued for a period of time sufficient to render the residue to be soluble in deionized water; and

iii) rinsing the substrate with deionized water.